

AMENDMENTS TO THE DRAWINGS:

A replacement drawing sheet is provided for Figure 2 in which the legends are in English.

REMARKS

The Examiner is thanked for the due consideration given the application. The specification is amended to insert headings. A substitute drawing sheet is provided with English legends.

Claims 1-19 are pending in the application. The amendments to claim 1 find support in the specification in the paragraph bridging pages 1 and 2. Claims 2-19 have been amended to improve their language in what is believed to be a non-narrowing fashion.

No new matter is believed to be added to the application by this amendment.

Rejections Over MORIKAWA

Claims 1, 2, 3, 6, 8, 11-13 and 14 have been rejected under 35 USC §102(b) as being anticipated by MORIKAWA (U.S. Patent 6,138,638). Claims 5, 7, 13, 14 and 15-19 have been rejected under 35 USC §103(a) as being unpatentable over MORIKAWA. These rejections are respectfully traversed.

The present invention pertains to a method of synchronizing injection with engine phase in an engine with electronic injector control having n cylinders, which does not employ a camshaft sensor. The present invention is illustrated, by way of example, in Figure 2 of the application, which is reproduced below.

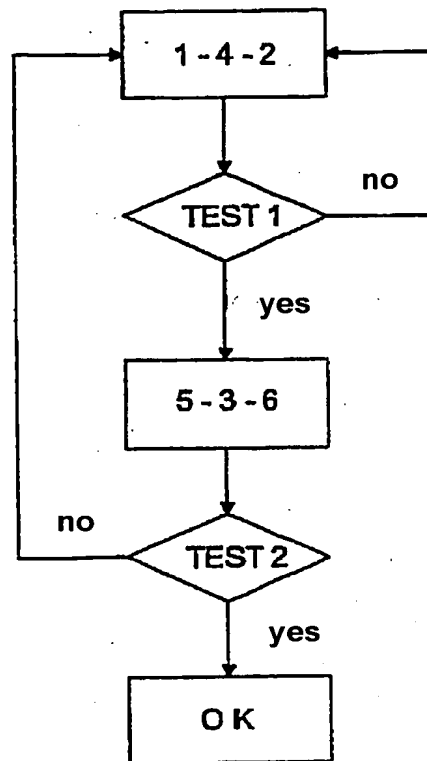


FIGURE 2

As is set forth in claim 1 of the present invention,
the method includes the following steps:

- injecting fuel into m cylinders in the predetermined injection sequence when the corresponding pistons, put into motion by means of a starter, are at an end of a compression phase, m being determined in advance as a function of n,
- measuring engine speed and/or acceleration,
- continuing the injection in the predetermined sequence if the engine speed and/or acceleration exceed a predetermined threshold, the injection being synchronized with the engine phase in this case, and
- continuing the injection with a phase change with respect to the preceding injections and with respect to the predetermined sequence, this phase change being a function of n and m, so that the injection is synchronized with the engine phase, in the contrary case,
wherein the method does not employ a camshaft sensor.

MORIKAWA pertains to a system for diagnosing and controlling a high-pressure fuel system for a fuel injection engine. The technology of MORIKAWA is illustrated in Figure 21, reproduced below, which shows a crank angle sensor 39 for a crank rotor 38.

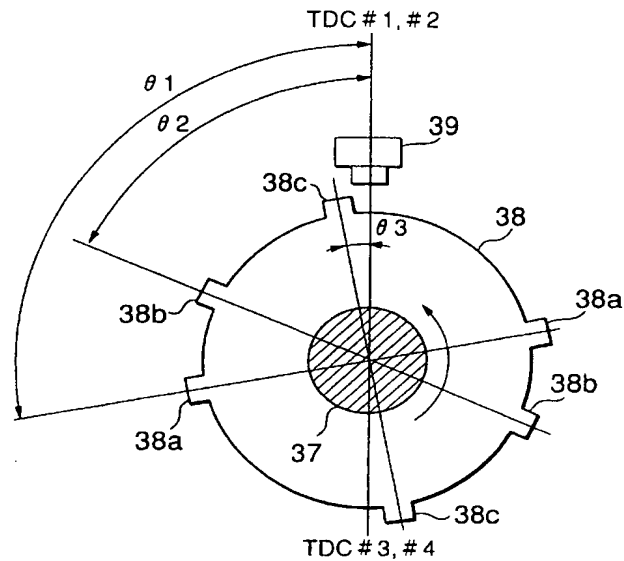


FIG. 21

Figure 22 of MORIKAWA, reproduced below, shows a sensor 42 over a cam rotor 41.

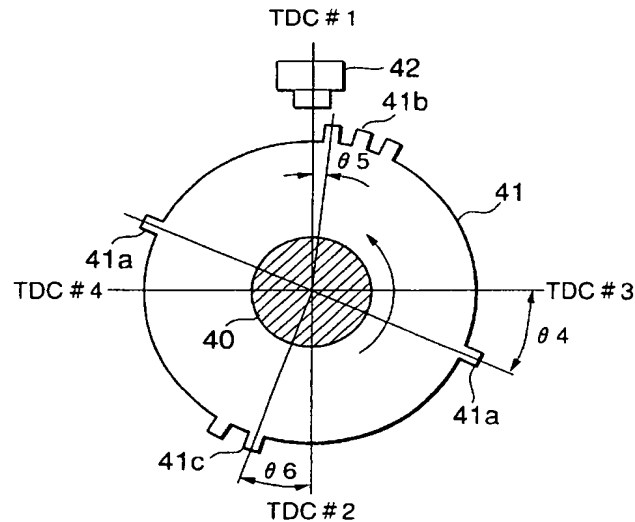


FIG. 22

That is, MORIKAWA uses a camshaft sensor, and the exact positioning of the engine is known. In contrast, the present invention determines the engine position by test. On the other hand, MORIKAWA merely determines the engine position by a basic check of the camshaft sensor output.

MORIKAWA thus fails to anticipate the present invention.

At page 6, the Official Action acknowledges that MORIKAWA fails to disclose a second measurement of the engine speed and its acceleration. The Official Action then asserts that this would be obtainable by one of ordinary skill from the teachings of MORIKAWA. However, one of ordinary skill would merely read the camshaft sensor output and would not be induced to utilize a second measurement because there is no need.

Additionally, the Official Action uses the single reference of MORIKAWA, and there is no teaching or inference in the reference itself to turn to a second measurement.

To establish a *prima facie* case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." *MPEP §2143*. In addition, if a reference needs to be modified to achieve the claimed invention "there must be a showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention in order to support the obviousness conclusion." *Sibia Neurosciences Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 55 USPQ2d 1927 (Fed. Cir. 2000).

MORIKAWA is thus insufficient to render the present invention, which does not use a camshaft sensor, *prima facie* unpatentable.

There rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

The Examiner is thanked for considering the Information Disclosure Statement filed September 19, 2005 and for making an initialed PTO-1449 Form of record in the application.

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.


The rejections are believed to have been overcome, obviated or rendered moot, and that no issues remain. The

Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item:

- replacement drawing sheet